

**REMARKS**

The Examiner objected to the specification.

The Examiner rejected claims 1-10 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejected claims 1-5 and 11-15 under 35 U.S.C. §102(b) as allegedly being anticipated by Patent No. 5,646,563, issued to Kuo.

The Examiner rejected claims 6-10 and 16-20 under 35 U.S.C. §103(a) as allegedly being unpatentable over US Patent No. 5,646,563, issued to Kuo.

Applicants respectfully traverse the §112, §102 and §103 rejections with the following arguments.

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**Specification Objection**

The abstract in the specification is objected to.

The Examiner alleges that "The abstract of the disclosure is objected to because

- (i) it uses words which can be implied, i.e., "comprises",
- (ii) the first and second sentences are merely a repeated information given in the title,

i.e., should be deleted.

Correction is required. Sec MPEP § 608.01(b) ”.

In response, Applicant has amended the abstract to replace the word "comprises " with the word "includes ". Additionally, Applicant contends that the Examiner's argument of "the first and second sentences are merely a repeated information given in the title, i.e., should be deleted " is not a recognized basis for objection to the abstract in the specification and therefore Applicant respectfully traverses the objection to the abstract.

**35 U.S.C. §112**

Claims 1-10 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner alleges that "As per claim 1, the claim is indefinite because it fails to particularly point out and claim the structure of the charge pump circuit for compensating spark current resulting from a switching mode of the control signal which the applicant regards as the invention. Specifically, the invention is about a structure of a charge pump circuit that is able to compensate for a spark current resulting from a switching mode of the control signal, however, the claim fails to claim such a structure. The evidence is that none of the elements recited in the charge pump circuit able to yield to recited result which is to compensate for the spark current as required .

As per claim 2, the claim is indefinite because it fails to particularly point out the structural relationship between the first FET, the current source, the second FET, the capacitors which applicant regards as the invention. Without a clear structural relationship between these elements, the claim merely a list of "catalogue of elements", and therefore, fails to meet the 112, second paragraph requirements.

As per claim 10, the dependency of the claim appears incorrect, i.e., -- 9 -- instead of "6" or the terms "first impedance value" and "second impedance value" lack antecedent basis.

As per claims 2-10, these claims are further rejected because of the indefiniteness of claim 1.

As per claim 20, the same problem exists as discussed in claim 10 .

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As to claims 1 and 2, Applicant contends that the rejection of claim 1 is moot because claim 1 has been canceled. Claim 2 has been rewritten in independent form to include all of the limitations of canceled claim 1. Applicant contends that claim 2 is not indefinite as alleged by the Examiner with reference to canceled claim 1. The Examiner alleges that canceled claim 1 fails to claim a charge pump structure. In response, Applicant contends that rewritten claim 2 claims a charge pump structure comprising, "a current source, a first field effect transistor (FET), a second field effect transistor (FET), and a first capacitor, wherein the first FET is electrically coupled to the second FET, wherein the first capacitor is electrically coupled to the second FET, wherein the current source is directly connected to a source on the first FET". Applicant argues that the elements (e.g., the second FET) is able to "to yield to recited result which is to compensate for the spark current as required".

As to the rejection of claim 2 that the claim is indefinite because as alleged by the Examiner "it fails to particularly point out the structural relationship between the first FET, the current source, the second FET, the capacitors which applicant regards as the invention. Without a clear structural relationship between these elements, the claim merely a list of "catalogue of elements", and therefore, fails to meet the 112, second paragraph requirements".

In response, Applicant has amended claim 2 to provide a structural relationship between the elements (e.g., wherein the first FET is electrically coupled to the second FET, wherein the first capacitor is electrically coupled to the second FET, etc.).

As to claims 10 and 20, Applicant has amended claims 10 and 20 to provide a correct dependency.

Based on the aforementioned arguments Applicants respectfully traverse the §112 rejection of claims 2-10 and 20.

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**35 U.S.C. §102**

Claims 1-5 and 11-15 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Patent No. 5,646,563, issued to Kuo.

The Examiner alleges that "As per claim 1, Kuo discloses a PLL (Fig. 4), comprising:

a voltage controlled oscillator (VCO 440) for providing a first signal (VCO\_IN);  
a phase comparator (310) for comparing the first signal (VCO\_IN) to a reference signal (REF\_IN) and providing a control signal (CNTRL N and CNTRL P); and

a charge pump circuit (320) for receiving the control signal and performing the recited function (note that these elements discussed sofar are merely elements in any prior art PLL), the charge pump circuit compensates for a spark current resulting from a switching mode of the control signal (column 4, lines 1-14, i.e., the structure of the charge pump 320 is for reducing the jitters (spark current) caused by the switching of the control signal).

As per claim 2, Kuo further discloses a list of elements comprises a current source (340), a first FET (328), a second FET (326), a first capacitor (C1), and a parasitic capacitor (every FET has this element when the FET is operated in a switching environment) wherein the current source is for discharging the first capacitor (it is clear that there is a path from the capacitor C1 through the FETs 326 and 328 to ground) wherein the second FET comprises parasitic capacitance that is to direct the spark current to ground (it is clear that the frequency of noise (jitters or spark current) caused by the switching is much higher than the switching frequency and parasitic capacitance exists between terminals of the second FET to ground, this parasitic capacitance acts as a filter to direct the jitters to ground) ".

The Examiner further alleges that "As per claim 11, the claim is merely a method to operate a PLL having the structure noted in claim 1, since Kuo teaches the circuit, he inherently teaches the

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recited method ”.

As to claim 1, Applicant contends that the rejection of claim 1 is moot because claim 1 has been canceled. Claim 2 has been rewritten in independent form to include all of the limitations of canceled claim 1. As to claims 2 and 11 as amended, Applicants respectfully contend that Kuo does not anticipate claim 2 and 11, because Kuo does not teach each and every feature of claims 2 and 11. For example, Kuo does not teach the feature of a “ wherein the current source is directly connected to a source on the first FET ” (emphasis added). Kuo does not teach a current source directly connected to a **source** on a FET as taught by Applicants claims 2 and 11. In contrast, Kuo teaches a current source 340 (see Kuo, fig 4) connected to a **gate** on a FET. Based on the preceding argument, Applicants respectfully maintain that Kuo does not anticipate claims 2 and 11 and that claims 2 and 11 are in condition for allowance. Since claims 3-10 depend from claim 2 and claims 13-20 depend from claim 12, Applicants contend that claims 3-10 and 13-20 are likewise in condition for allowance.

**CONCLUSION**

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

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